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NOTES ON THE GENUS *ACACIA* IN THE NORTHERN TERRITORY

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Abstract

Four new *Acacia* species are described from the central Australian region of the Northern Territory, viz. *A. ammobia* Macon., *A. ayersiana* Macon., *A. macdonnelliensis* Macon., and *A. olgana* Macon. The new combination *A. multisiliqua* (Benth.) Macon., is provided for the tropical taxon, *A. simsii* var. *multisiliqua* Benth. One new record is noted, namely *A. laccata* Pedley.

1. **Acacia multisiliqua** (Benth.) Maconochie, comb. et stat. nov.

Basionym: A. simsii A. Cunn. ex. Benth. var. *multisiliqua* Benth., Fl. Aust. 2 : 383 (1864).

Holotypus: BM — *R. Brown* "Mimosa multisiliqua No. 6 desc. Carpentaria Island, 1803".

Isotypi: E, K.

When Bentham (1864) described this taxon as a variety of *A. simsii* he commented that when he first saw Brown's specimens from the Carpentaria Islands he was inclined to regard them as representing distinct species under Brown's manuscript name of *A. multisiliqua* but subsequently found that the two forms pass one into the other.

Pedley (1975) cited the sheet "A. Cunn. 211, Cleveland Bay, 2nd Voyage of Mermaid 1818", at Kew as the holotype. Unfortunately this citation is incorrect as the specimen No. 211 is from Sim's Island, April 1818 and the Cleveland Bay specimen is June No. 314, 1819. This confusion is easily made as the K sheet has three unnumbered specimens on it and a label with the following notes:

"Sim's Island	April	$\frac{211}{1818}$
Cleveland Bay	June	$\frac{314}{1819}$
Repulse Bay	June	$\frac{316}{1819}$

East Coast, Tropical Australia
A. Cunningham"

In the original description Bentham (1842) cited "N.E. Coast, Clevelands' Bay — Cunningham" and several other specimens. Hence the type citation should read, "A. Cunn. $\frac{314}{1819}$ Cleveland Bay, 2nd Voyage of Mermaid".

Reference to Cunningham's unpublished manuscript at K and duplicate sheets at BM does not clarify the use of the epithet "simsii", but it does verify the Cleveland Bay specimen as 314. Whether Cunningham intended to name this species after Dr John Sims of England or after Sim's Island is unclear. King (1826) named Sim's Island in honour of Dr Sims at Cunningham's request. Reference to Cunningham's manuscript shows no details alongside number 211 except, "1st Voyage of Mermaid"; while under 314, "Acacia sp. foliis linearibus .... Cleveland Bay 14 June," over which has been added "*simsii* A. Cunn. Lond. J. Bot. v.1 p. 365". Examination of these historical specimens at K and BM show them as mixed collections on the same sheet in several cases. The concept and distribution of *A. simsii* A. Cunn. ex. Benth. as proposed by Pedley (1975) is not in doubt only further clarification of individual specimens was needed.

Specimens 314, 316 are *A. simsii* while 211 from Sim's Island is *A. multisiliqua,* which is restricted to the Northern Territory and Queensland in Australia and is readily distinguished from *A. simsii* as follows:

Seeds obloid 4-5 mm long, 2 mm diam.; pods with constriction between seeds; phyllodes falcate 40-60 mm long, 6-10 mm broad; heads shortly pedunculate, peduncle 3-6 mm long .... *A. multisiliqua*

Seeds subglobular 2.5-3 mm diam., 1.5 mm thick; pod flattened, 6 mm wide with distinct suture or ridge on each side; phyllodes straight to slightly curved, tapered at each end 12-15 cm long, 5-7 mm broad; heads pedunculate, peduncle 5-10 mm long .... *A. simsii*

In F. Mueller's 'Iconography of Australian species of Acacia' Dec. VII (1887) the illustration of fruiting material and seed is *A. simsii* but the central portion with flowers and broad phyllodes is *A. multisiliqua.*

Description

An erect, often spindly, small *shrub* to 2 m tall. *Phyllodes* short, falcate, (35-)40-60(-80) mm long, (4-)6-10(-12) mm wide at its broadest point, 3-5 nerved, with a weak mucro at the tip, surface dull, papillose, gland adaxial 6-9 mm from the base of the phyllode. *Inflorescences* single or paired, heads globular and 5-6 mm in diameter, peduncles 3-6 mm long. *Flowers* 5-merous, *calyx* lobes linear-spathulate with ciliate tips about 1.5 mm long, *corolla* 2-2.5 mm long, almost divided to base, petals acute, glabrous with thickened tip and central nerve. *Ovary* glabrous. Bracteoles linear, with a large spathulate terminal point. *Pods* 50-60 mm long, 3-4 mm wide, constricted between seeds. Seeds arranged longitudinally and up to 7 in the pod, obloid, 4-5 mm long, 2 mm in diameter.

Selected specimens

R. Brown, Carpentaria Island (type) (BM, K); *A. Cunningham 211,* Sim's Island, 1818 (BM, K); *D. Hinz 71-110,* Mt. Saunders, Gove, 1.x.1971 (CANB, K, NSW, NT); *D. Hinz 741611,* Gove, 16.xi.1974 (DNA, K, NT, PERTH); *R.L. Specht 381,* Hemple Bay, Groote Eylandt, 6.v.1948 (K).

2. Acacia laccata Pedley, Proc. Roy. Soc. Qld 75 : 31 (1964).

A new record for N.T., *J.R. Maconochie 1964,* 8 km S.W. Tin Mine (17s47'S. 137°45'E), 4.vi.1974 (BRI, CANB, DNA, NT).

3. Acacia pachycarpa F. Muell. ex Benth., Fl. Aust. 2 : 408 (1864).

A. crassifrugis Tindale et Maconochie, Contr. N.S.W. Nat. Herb. 4 (5) : 267 (1972), syn. nov.

Pedley (1974) stated that *A. crassifrugis* Tindale et Maconochie was likely to prove conspecific with *A. pachycarpa* F. Muell. ex Benth. The type of the latter name comprised two elements one of which was *A. ancistrocarpa* Maiden et Blakely. Since the publication of *A. crassifrugis* further field trips have been made into the type localities of both species and the results of these studies indicate that *A. crassifrugis* is undoubtedly conspecific with *A. pachycarpa.* Also until further trips in the N.T.-W.A. area of Sturt's Creek have been made this species appears to be restricted to the N.T. region, as I have been unable to locate it on the W.A. side of this creek.

4. Acacia ammobia Maconochie, sp. nov.

Arbor vel *frutex* 3-6 m altus, truncis singulis vel pluribus. Cortex nigricans persistens. *Phyllodia* in arbore erectiuscula. Phyllodia complanata, linearia, rigida, coriacea, multinervia, in utraque extremitate contracta, nervo medio siccitate leviter prominentiore, 12-22 cm longa, medio 5-7 mm lata, glabra vel leviter pruinosa. *Inflorescentia* spicata, cylindrica, 25-40 mm longa, 6-7 mm diametro, pedunculo 2-3 mm longo suffulta vel sessilis. *Corolla* pentamera, glabra, usque ad dimidium divisa, lobis apice incrassatis. *Calyx* cupulatus, apicibus loborum acutis et ciliatis. Bracteola spathulata. *Ovarium* villosum, stylus glaber. *Legumen* 9-11 cm longum, 2 mm latum, secus suturam porcatum, glabrum vel

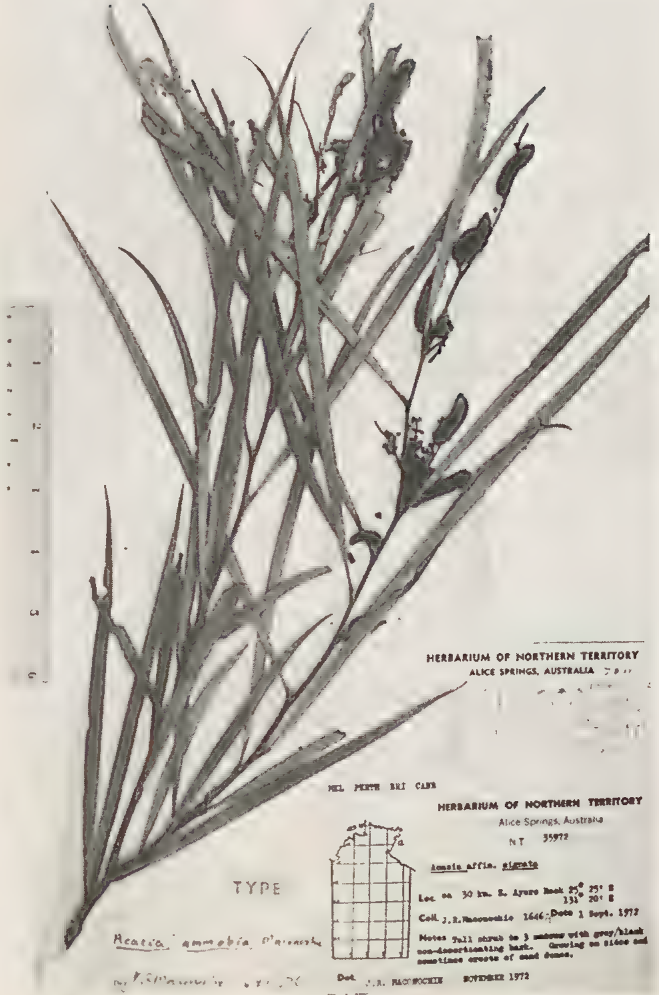


Fig. 1. *Acacia ammobia* Maconochie, holotype, *Maconochie 1646A* (NT).



Fig. 2. *Acacia ayersiana* Maconochie, holotype, *Maconochie 1930* (NT).

aliquando pruinosum. Semen obloideum, 5 mm longum, 2 mm latum, 1 mm crassum, in legumine longitudinaliter dispositum.

Holotypus: *J. R. Maconochie 1646A*, ca. 30 km E. of Ayers Rock (25°25'S, 131°20'E) 1.ix.1972 (NT).

Isotypi: BRI, CANB, MEL, PERTH.

A small *tree* or tall *shrub* 3-6 m high with single or several stems or trunks. Bark grey-black, non-decorticating. *Phyllodes* tending to be erect on the tree. Phyllodes flattened, linear, rigid, coriaceous, multi-veined, midvein slightly prominent when dry, tapering at each end, 120-220 mm long, 5-7 mm wide at the centre, surface glabrous or slightly pruinose. *Inflorescence* a cylindrical spike, 25-40 mm long, 6-7 mm diameter, pedunculate (2-3 mm) to almost sessile. *Corolla* 5-merous, divided halfway, glabrous, apices of petals thickened. *Calyx* cupulate, sparsely sprinkled with hairs at apices of acute lobes. Bracteoles spathulate. *Ovary* villous. *Pod* 9-11 cm long, 2 mm broad, ridged along the suture, glabrous to pruinose. Seeds arranged longitudinally in pod, narrowly obloid, 5 mm long, 2 mm wide, 1 mm thick, funicle yellow-white folded and attached to one end. (Fig. 1).

Selected specimens

G. Chippendale (NT 2914), 49.8 km E. Ayers Rock, 14.ix.1956 (NT, NSW); *N.N. Donner 4347*, ca. 13 km W.N.W. Mt. Connor (25°27'S; 131°47'E), 21.viii.1973 (AD, DNA, NT); *P.K. Latz 5728*, 35 km W.S.W. Mt. Olga (25°21'S; 130°27'E), 22.ix.1974 (DNA, NT, PERTH); *J.R. Maconochie 1800*, 37.5 km E. Ayers Rock (25°20'S; 131°28'E), 17.x.1973 (NT).

This species is allied to *A. doratoxylon* of eastern Australia and *A. lasiocalyx* of Western Australia. It differs from the former in having longer and less falcate phyllodes, longer inflorescences, an erect habit and phyllodes without the 3 prominent veins as noted by Maiden (1909) for *A. doratoxylon*. *A. lasiocalyx* has villous calyces and much longer and more flexible phyllodes with prominent central nerve.

5. **Acacia ayersiana** Maconochie, sp. nov.

Arbor parva vel *frutex* pluricaulis, 3-6 m altus, cortice nigricanti semi-persistenti. *Phyllodia* complanata, lanceolata vel falcata, plurinervia utraque extremitate contracta, paginis glabris obscuris vel subtiliter sericeis, apice recto vel leniter uncato, 50-100 mm longa et medio 5-10 mm lata, margine glutinoso-cerino. Glandula basalis circularis, inconspicua vel obsoleta. *Inflorescentia* spicata, cylindrica, 15-25 mm longa, 3-6 mm diametro, pedunculo 2-3 mm longo vel nullo, rhachis glabra, bracteolis spathulatis. *Flores* pentamera, *calycis* lobi spathulati, glabri vel glutinosi; *corolla* glabra vel leviter glutinosa vel sericea, calyce duplo vel triplo longior, lobis costa valida et apicibus incrassatis instructis. *Ovarium* bruneum, leviter sericeum vel glabrum. *Legumen* complanatum, pedunculatum (4-6 mm) margine 1 mm alatum, reticulatum, sericeum vel glabrum, seminibus transversim dispositis. Semina anguste ovoidea, 5-6 mm longa, 2-3 mm lata, funiculo albo ad apicem seminis plicato.

Holotypus: *J.R. Maconochie 1930*, Ayers Rock (25°23'S, 131°05'E), 19.x.1973 (NT).

Isotypi: AD, BRI, DNA, NSW, PERTH.

Small *tree* or several stemmed *shrub* from 3 to 6 m high with black-grey semi-persistent bark. *Phyllodes* flattened, lanceolate to falcate, multi-veined, tapering at each end, with dull glabrous or finely sericeous surface, tip straight or weakly hooked, 50-100 mm long and 5-10 mm wide at the middle, margin yellow-brown and glutinous. Gland circular, basal but inconspicuous or absent. *Inflorescence* a shortly pedunculate (2-3 mm) cylindrical spike, 15-25 mm long, 3-6 mm in diameter, rhachis glabrous, bracteoles spathulate. *Flowers* 5-partite. *Corolla* glabrous or sericeous (sometimes slightly glutinous), petals with strong midribs and thickened apices. *Calyx* lobes spathulate, 1/2/-1/3 length of corolla, glabrous or glutinous-sericeous. *Ovary brownish, weakly* sericeous to glabrous. *Pods* flattened, pedunculate (4-6

mm), margin with 1 mm wide wing, with reticulate, sericeous or glabrous surface, seeds arranged transversely in pod. Seeds narrowly obloid, 5-6 mm long, 2-3 mm broad. Funicle white, folded at end of seed. (Fig. 2).

Selected specimens

J.R. Maconochie 643, Ayers Rock, 17.i.1969 (NT); *J.R. Maconochie 1928*, 75 km N-E Docker River Settlement, 29.viii.1973 (NT).

This species is allied to *A. kempeana* and *A. aneura* var. *latifolia;* it differs from the former in the longer phyllodes with a tapering acute apex and shorter but broader winged pods. From *A. aneura* var. *latifolia* it differs in the broader pod and larger phyllodes.

6. Acacia macdonnelliensis Maconochie, sp. nov.

Arbor vel *frutex* 3-6 m altus, truncibus singulis vel pluribus. *Phyllodia* in arbore erectiuscula. Phyllodia complanata, linearia, falcata, multinervia glabra vel leviter glutinosa, apice leviter uncinata, (50-)70-100(-120) mm longa, 1.5-5 mm lata. Glandula basali inconspicua vel obsoleta. *Inflorescentia* spicata, cylindrica, 20-30 mm longa, 5-6 mm diametro, pedunculo 4-5 mm longo, rhachis glabra, bracteolis spathulatis. *Flores* pentamera; *calyx* cupulatus, lobis acutis parvis circiter tertia parte longitudinis calycis, basi sparse villosus. Lobi *corollae* acuti, glabri, apice incrassato, calyce circiter bis longiores. *Ovarium* glabrum vel sericeum. *Legumen* sessile, angustum, lineare, inter semina leviter constrictum, pagina fusca reticulata et leviter glutinosa, 40-50 mm longum, 3-4 mm latum. Semina nigro-fusca, anguste obloidea, longitudinaliter disposita, 4-5 mm longa, 1.5 mm lata, funiculo luteolo, ad apicem seminis plicato.

Holotypus: *J.R. Maconochie 440,* Serpentine Gorge, 29.vii.1967 (NT).

Small *tree* or tall *shrub* to 3-5 mm high with one or several trunks. *Phyllodes* flat, erect, linear, falcate, multinerved, glabrous or slightly glutinous, tip weakly hooked, (50-)70-100(-120) mm long, 1.5-5 mm wide. Gland basal, inconspicuous or absent. *Inflorescence* a cylindrical spike, 20-30 mm long, 5-6 mm in diameter, peduncles 4-5 mm long, rhachis glabrous, bracteoles spathulate. *Flowers* 5-partite; *calyx* cupular with sparse villous pubescence at base, lobes acute and small (to about 1/3 length of calyx). *Corolla* lobes acute, glabrous with thickened apices about twice the length of calyx. *Ovary* glabrous or with fine silky pubescence. *Pods* sessile, narrow, straight, slightly constricted between the seeds, dark brown, reticulate and slightly glutinous, 40-50 mm long, 3-4 mm wide. Seeds arranged longitudinally in pod, black-brown, narrowly obloid, 4-5 mm long, 1.5 mm broad, funicle yellow-white, folded at end of seed. (Fig. 3).

Selected specimens

G. Chippendale (NT 3595), Bagots Creek, George Gill Range, 13.viii.1957 (NT); *P.K. Latz 5804*, Macdonald Downs, 24.x.1974 (NT, PERTH); *J.R. Maconochie 452*, Standley Chasm area, 8.viii.1967 (NT).

This species is allied to *A. adsurgens* Maiden et Blakely but differs in its broader phyllodes and in having a tree rather than a multi-stemmed rounded shrub habit. *A. adsurgens* is a species of the spinifex sand plains while *A. macdonnelliensis* mostly grows on ridges, hillsides and gullies of the ranges in central Australia.

7. Acacia olgana Maconochie, sp. nov.

Arbor vel *frutex,* 3-15 m altus, truncis singulis vel pluribus. *Phyllodia* multinervia, nervo medio siccitate aliquando leviter promeninentiore, lata, recta, aut leviter curvata vel falcata, glabra aut leviter pruinosa (60-)90-120(-150) mm longa, (2.5-)3-4(-5) mm lata. *Inflorescentia* spicata, sessilis, cylindrica, 17-22 mm longa, 3-4 mm diametro. Rhachis pubescens, sub fructu glabrescens. *Flores* pentamera; *sepala* spathulata, ciliata, ca. 1 mm longa; *corolla* glabra, ca. 1.5 mm longa. *Ovarium* papillosum, stylus glaber. *Legumen* sessile, laeve, nitidum, chartaceum, glabrum vel sparse pilosum, basi aliquando pubescens, 40-70 mm longum, 3-4 mm latum. Semen subglobosum, fusco-nigrum, nitidum, 3 mm longum, 2.5 mm latum, 2 mm crassum, in legumine longitudinaliter dispositum.

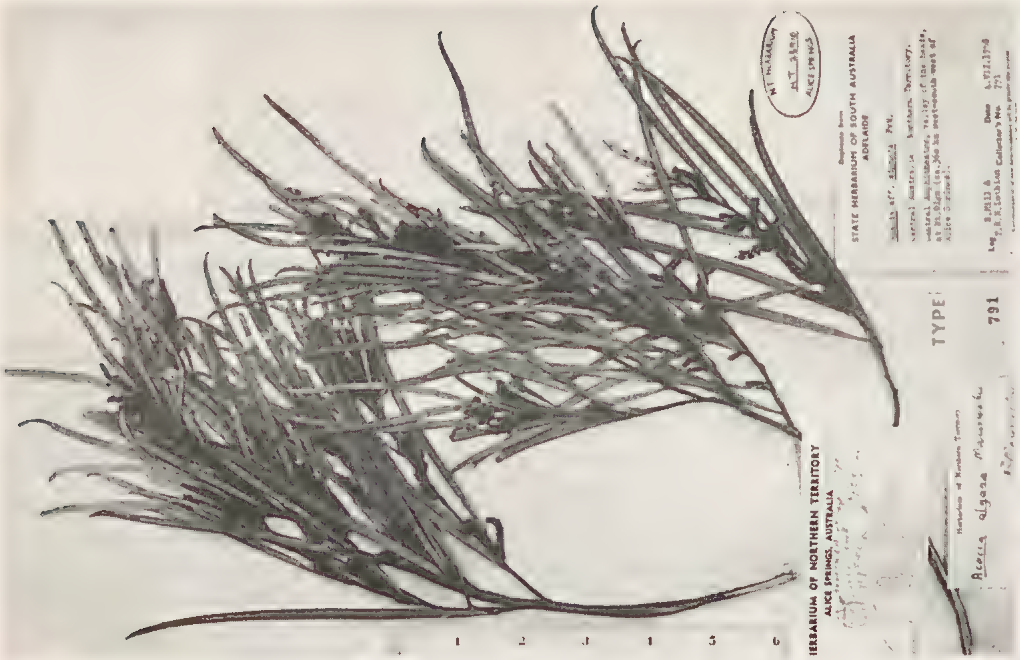


Fig. 4. *Acacia olgana* Maconochie, holotype, *Hill & Lothian 791* (NT).

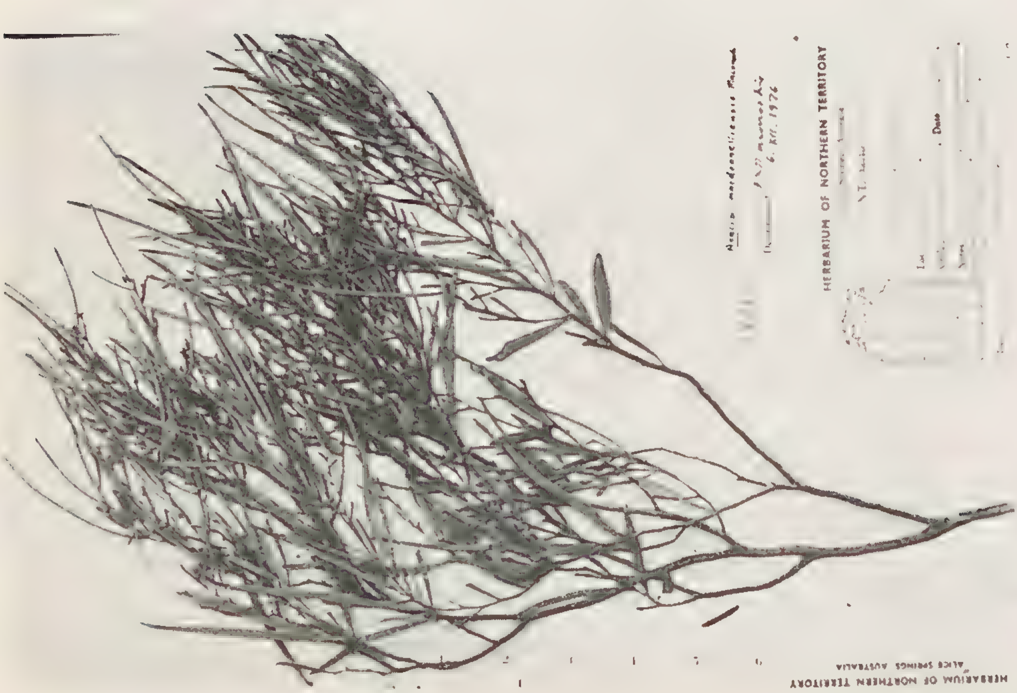


Fig. 3. *Acacia macdonnelliensis* Maconochie, holotype, *Maconochie 440* (NT).

Holotypus: *R. Hill & T.R.N. Lothian 791,* Central Amphitheatre, Valley of Heads, at Mt. Olga, N.T., 4.vii.1958 (NT).

Isotypi: AD, K.

A *tree* from 3 to 15 m high, single-stemmed or with several main stems or trunks. Bark rough, grey-brown, flaky but persistent. Branchlets reddish with a whitish reticulate-ovate pattern of flaking bark. *Phyllodes* many nerved, sometimes the central one slightly more prominent when dry, flat, tapering towards the hooked tip, straight to slightly curved or falcate, shiny, glabrous or with a weakly developed pruinose surface (60-)90-120(-150) mm long, (2.5-)3-4(-5) mm broad. Gland yellow-brown ovoid, about 0.5 mm long, about 3 mm from base. *Inflorescences* single or paired cylindrical sessile spikes, 17-22 mm long and 3-4 mm in diameter. Rhachis of inflorescence with yellow silky pubescence but becoming sparse or glabrous when with fruit. *Flowers* 5-merous, *sepals* spathulate, ciliate, about 1 mm long, *corolla* glabrous, divided in upper third, 1.5 mm long, 1 mm at widest, with a central ridge, lobes 0.5 mm long. *Ovary* papillate hairy. *Pod* sessile, smooth, shiny, papery, glabrous or with very sparse hairs, sometimes pubescent at the base, convex on opposite sides over successive seeds, suture edges straight, 3-4 mm wide and 40-70 mm long. Seeds subglobular, brown-black, shiny, 3 mm long, 2.5 mm wide, 2 mm thick, arranged longitudinally in pod. Funicle yellow-white, small, folded but not encircling the seed. (Fig. 4).

Selected specimens

P.K. Latz 1793, Petermann Ranges (25°07'S, 129°24'E), 24.ix.1971 (DNA, NT); *J.R. Maconochie 1649,* Olga Gorge (25°25'S, 130°50'E), 1.ix.1972 (NT, PERTH); *J.R. Maconochie 1931,* loc. cit., 19.x.1973 (BRI, DNA, NT, NSW, PERTH).

This species is allied to *A. signata* but differs in having (a) narrower phyllodes without red margin, (b) spathulate sepals, (c) glabrous corolla, (d) narrower more papery fruit and (e) not the centrally prominent vein as referred to by Maiden (1917) where the description of *A. signata* was emended.

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